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described in the International Application of Rigler et al., PCT/EP 94/00117. The sample volume  
is connected with a receptor means through a pore of a capillary or a pore of a membrane wall whose  
smallest aperture  $D$  is given by  $100\text{ }\mu\text{m} \leq D \leq 0.1\text{ }\mu\text{m}$ .

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Page 14, please delete the fourth paragraph and replace it with the following paragraph:

Extended arrays of small volume elements can be illuminated by using holographic grids.

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According to the invention, the measuring volumes are measured confocally for fluorescence  
properties of molecules contained therein by using a multitude of pinhole apertures in the image  
plane, by positioning multiarray detector elements in the image plane, or by using optical fiber  
bundles to which the light is coupled in the image plane and transferred to photon detectors.

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Page 14, please delete the fifth paragraph (which bridges over to page 15) and replace it with  
the following paragraph:

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In the highly parallelized illumination of small volume elements, there is the problem of  
registration of the emitted fluorescence signals from the individual volume elements. In the patent  
application PCT/EP 04/00117, it is reported that it is possible to illuminate small space elements in  
parallel and to focus the respective fluorescence signals individually on multiarray detectors by using  
confocal pinhole aperture systems in the image plane, or to couple the signals into optical  
waveguides at the position and in lieu of the pinhole apertures and to guide them onto detector  
elements, or to position the multiarray detectors themselves in lieu of and at the position of the